PCT/DE00/03052

New claim 1 05.11.2001

Cable or Bowden cable window lifter for motor vehicles 2') guide rail one least at having longitudinally aligned slot (20, 20')/ and mounted on a carrier plate (1) of a motor vehicle door, a carrier (3, 3') holding a window pane and displaceable along the guide rail (2, 2'), wherein the carrier bears at least in part against the outside (21) and the inside (22) of the guide rail (2, 2') and engages through the slot (20, reversing devices (5, 5/; 6, 6') mounted at the ends of the guide rail (2,/2), and a cable (8) in active connection with the carrier (3, 3') and with a drive device (7, 70) and guided over the reversing device,

## characterised in that

the carrier plate (1) itself undertakes the separating and sealing function and that the open side of the guide rails (2, 2) shaped out from the base surface (B) of the carrier plate (1) is covered in a manner which provides a moisture seal.

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2. Window lifter according to claim 1 characterised in that the cover (9) is designed flat and is mounted in the plane of the base surface (B) of the carrier plate (1) or the guide rail (2, 2').

- 3. Window lifter according to claim 1 or 2 characterised in that the cover comprises a permanent adhesive strip (9).
- 4. Window lifter according to claim 1 or 2 characterised in that the cover consists of a shaped part (10) inserted into the inside (22) of the guide rail (2, 2').
- 5. Window lifter according to claim 1 or 2 characterised in that the cover consists of a shaped member (11) connected to the carrier plate (1) and resting on the edges of the carrier plate (1) which adjoin the guide rail (2, 2').
- 6. Window lifter according to claim 1 or 2 characterised in that the cover consists of a shaped member (12) which can be inserted by side projections (121, 122) into growes (21, 22) of the guide rail (2, 2') which is shaped out of the base surface (B) of the carrier plate (1), or in grooves, slots or hooks on the carrier plate (1), and has a cable socket (123) for guiding the cable (8).

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- 7. Window lifter according to claims 4, 5 or 6 characterised in that the shaped part (10) or shaped member (11) consists of a moulded plastics part or member.
- 8. Window lifter according to at least one of the preceding claims characterised in that the carrier (3, 3') is formed in two parts and that the one part (31) of the carrier (3, 3') bears against the outside (21) of the guide rail (2, 2') and the other part (32 of the carrier (3, 3') bears against the inside (22) of the guide rail (2, 2').
  - 9. Window lifter according to claim 8 characterised in that the carrier (3, 3') is divided in the region of the cable nipple chamber (36) and has two openings (41, 41'; 42, 42') above and below the cable nipple chamber (36) for holding the counter member which forms the second part (32) of the carrier (3, 3').
- 10. Window lifter according to claim 9 characterised in 25 that the counter member (32) is made from a sheet metal angle (45) with a plastics insert (46).

11. Window lifter according to at least one of the preceding claims 1 to 7 characterised in that the carrier (3, 3') is formed in one piece, that the part (33) of the carrier (3, 3') bearing against the outside (21) of the guide rail (2, 2') is connected to the cable (8) and that the part (34) of the carrier (3, 3') bearing against the inside (22) of the guide rail (2 2') is shaped so that the carrier (3, 3') can be inserted in the slot (20) of the guide rail (2, 2') and can be connected with keyed engagement with the guide rail (2, 2') whilst displaceable in the longitudinal direction of the guide rail (2, 2').

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12. Window lifter according to claim 11 characterised in that the cable (8) is connected eccentrically to the carrier (3, 3').

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- 13. Window lifter according to claim 12 characterised in that the cable (8) is connected to the carrier (3, 3') outside of the guide surface produced by the imprinting of the guide rail (2, 2').
- 14. Window lifter according to at least one of the preceding claims 1 to 7 characterised in that the carrier (3, 3') is formed in one piece and has a longitudinal fixing and slide region (30) which after pushing through the slot (20) of the guide rail (2, 2') and turning the through axis (300) about the transverse axis of the one-piece carrier (3, 3') bears on the outside and inside respectively against the edges of the guide rail (2, 2') which adjoin the slot (20) of the guide rail (2, 2'). New claims

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- 15. Window lifter according to at least one of the preceding claims characterised in that the cable (8) is connected centrally relative to the carrier (3, 3') to its cable nipple chamber (36).
- 16. Cable window lifter according to at least one of the preceding claims for curved carrier plates characterised in that the cable (8) running between the reversing devices (5, 5'; 6, 6') does not intersect the base surface (B) of the carrier plate (1).

17. Window lifter according to at least one of the preceding claims for curved carrier plates, characterised in that the cable (8) running between the reversing devices (5, 5'; 6, 6') intersects the base surface (B) of the carrier plate (1) at least in parts and that the cover (9) is formed so that it does not contact the cable (8) at any point.

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- 18. Window lifter according to at least one of the preceding claims characterised in that the upper and lower end regions (2a, 2a'; 2b, 2b') of the guide rails (2, 2') are formed like ramps.
- 10 19. Window lifter according to at least one of the preceding claims characterised in that the guide rails (2, 2') are formed curved in the longitudinal direction relative to the base surface of the carrier plate (1).
  - 20. Window lifter according to at least one of the preceding claims characterised in that the carrier plate (1) is provided with additional guide slots and/or guide elements shaped out of the base surface (B) of the carrier plate (1) to hold slide or fixing elements connected to structural parts of elements of a vehicle door, more particularly arm rests.
- 21. Window lifter according to at least one of the preceding claims characterised in that the imprint of the guide rail (2, 2') is formed by deep drawing or stamping a metal carrier plate (1) or by injection moulding or thermoforming a plastics carrier plate (1).

22. Window lifter according to at least one of the preceding claims characterised in that the side edges of the carrier plate (1) are connected sealed against moisture to a carrier plate socket of the vehicle door.